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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,833	03/04/2002	Eisuke Sasaoka	50212-354	2861

20277 7590 08/05/2003

MCDERMOTT WILL & EMERY
600 13TH STREET, N.W.
WASHINGTON, DC 20005-3096

EXAMINER

HUGHES, DEANDRA M

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,833

Applicant(s)

SASAKA ET AL.

Examiner

Deandra M Hughes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/4/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukitani (US 6,301,419 filed May 4, 2000) in view of Wysocki (US 6,396,623 filed Jan. 31, 2001).

**Please note that the references made herein are done so for the convenience of the applicant and are in no way intended to be limiting. The reference should be considered its entirety.

Tsukitani discloses an optical fiber having:

- a chromatic dispersion with an absolute value of 18 ps/nm/km or more but 83 ps/nm/km or less (abstract);
- an effective area of 15 μm^2 or more (abstract)

Tsukitani also discloses the use of the fiber as an optical amplifier but does not specifically disclose the use of the apparatus as a *Raman* amplifier (col. 1, lines 23-35). Wysocki teaches the use of a dispersion compensating fiber as an L-Band, C-Band, or S-band Raman amplifier (e.g. cols. 5, lines 45-65 and lines 41-55, respectively) wherein the Raman amplifier is pumped (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the fiber of Tsukitani

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as a transmission fiber for Raman amplification for the advantage or reducing fiber nonlinearities during Raman amplification.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukitani (US 6,301,419 filed May 4, 2000) in view of Wysocki (US 6,396,623 filed Jan. 31, 2001) as applied to claims 9-17 above, and further in view of Ghera (US 6,433,922 filed Feb. 26, 2001). Tsukitani in view of Wysocki does not specifically disclose the claimed Raman Gain Coefficient. However, Ghera teaches that the Raman Gain Coefficient may be calculated (cols. 5-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to calculate the Raman gain coefficient of Tsukitani's fiber for the advantage of calculating the expected performance of the Raman Amplifier for a given fiber type, as is specifically taught by Ghera (col. 5, lines 51-54).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okuno (Non-linear fiber based...), Okuno '892, and Kato disclose Raman amplifier fiber types.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M Hughes whose telephone number is 703-306-4175. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Black can be reached on 703-305-9707. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

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872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



DMH

July 31, 2003



NELSON MOSKOWITZ
PRIMARY EXAMINER